REMARKS

Claims 1-30 are pending in the application. Claims 1-15 and 22-24 are rejected. Claims 16-21 and 25-30 are objected to but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim.

Claims 1, 3, 8, 13, 14, 15, 21, 25 and 30 have been amended. No new matter has been added. Claim 6 has been cancelled.

Claims 4, 13, 14 and 25 stand objected to as containing informalities for lacking proper antecedent basis. Applicant, through his attorney, wishes to thank the examiner for his observation and has amended claims 13, 14 and 25 to provide proper antecedent basis as suggested by the examiner. With regard to claim 4, applicant has amended claim 1, from which claim 4 depends, to provide proper antecedent support.

Applicant submits that the amendments made to the claims have overcome the examiner's objection. Applicant respectfully requests that the objection be withdrawn and the claims allowed.

Claims 1-3 and 7 stand rejected under 35 U.S.C. §102(e) as being anticipated by USP No. 6,125,147 to Florencio. It is the examiner's position that Florencio discloses each and every element of the present invention.

It is well recognized that to constitute a rejection pursuant to 35 USC §102, i.e., anticipation, all material elements recited in a claim must be found in one unit of prior art. Applicant respectfully disagrees with, and explicitly traverses, the examiner's reason for rejecting the claim. However, in the interest of advancing the prosecution of this matter, applicant has amended independent claim 1 to include the subject matter recited in claims 4 and 6. More specifically, claim 1 now recites, in part, "means for extracting header information from said quantized data from said decoding means and for performing a prediction operation according to predetermined criteria, wherein said prediction operation defines a computation load from header information selected from the group consisting of: macroblock-type, motion vector magnitude,

motion vector count, non-zero discrete cosine transformer coefficients and a coded block pattern (CBP)."

Florencio, on the other hand, teaches a MPEG video compression system and defines a fidelity indicative parameter signal that is used as a measure of the quality or fidelity of images or frames in the data signal. The fidelity indicative parameter is used by the decoding system to degrade high quality frames to a lower quality in order to equalize the overall picture. (See col. 8, lines 27-30, which state, in part, "[i]t will be noted that one technique used to equalize degradation levels is to further degrade one or more relatively high fidelity video or image frames."). Florencio fails to disclose a decoding system determining "a computation load from header information selected from the group consisting of: macroblock-type, motion vector magnitude, motion vector count, non-zero discrete cosine transformer coefficients and a coded block pattern (CBP)" as is recited in amended claim 1. Having shown that amended claim 1 includes subject matter not disclosed by Florencio, applicant submits that the invention recited in claim 1 is patently distinguishable from the device taught by Florencio. Therefore, Applicant respectfully requests entry of the amendment, withdrawal of the rejection, and allowance of the claim.

With regard to claims 2, 3 and 7, these claims ultimately depend from independent claim 1, which has been shown to be allowable over the cited reference. Accordingly, claims 2, 3 and 7 are also allowable by virtue of their dependence from an allowable base claim.

Having shown that the present invention includes subject matter not disclosed by Florencio, applicant submits that the reason for the examiner's rejection of claims 1-3 and 7 has been overcome and can no longer be sustained. Applicant respectfully requests reconsideration, withdrawal of the rejection and allowance of the claims.

Claims 4, 5, 8-11, 13-15 and 22-23 stand rejected pursuant to 35 USC §103 as being unpatentable over Florencio in view of USP No. 6,408,096 to Tan. It is the examiner's position that with regard to claim 4, Florencio does not disclose prediction operation that defines a computation load, but Tan teaches the prediction operation. With regard to claim 5, Florencio does not disclose the computation load is selectively adjusted by scaling the IDCT but Tan teaches the computation load is selectively adjusted by scaling the IDCT. With regard to independent claim 8 and dependent claims 9-11 and 13, Florencio does not teach a complexity estimator, however, Tan teaches a complexity estimator. Thus it would be obvious to combine Tan's complexity estimator with Florencio's video decoder for properly decoding as much video data as possible. With regard to independent claim 14 and dependent claim 15, it is the examiner's position that Florencio does not disclose an estimator for calculating a total computation load. However, Tan teaches a complexity estimator for calculating a total computation load. With regard to independent claim 22 and dependent claim 23, it is the examiner's position that Florencio does not disclose an estimator but Tan teaches an estimator employing the estimator for predicting a total computation load.

Applicant respectfully disagrees with, and explicitly traverses the examiner's reasons for rejecting the claims. A claimed invention is prima facie obvious when three basic criteria are met. First, there must be some suggestion or motivation, either in the reference themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the teachings therein. Second, there must be a reasonable expectation of success. And, third, the prior art reference or combined references must teach or suggest **all** the claim limitations. As will be shown, neither Florencio nor Tan suggest or motivate one to combine their teachings. Furthermore, even if their teachings were combined, the combined device would not include, teach or suggest all the claim limitations recited in the claims.

As noted above, Florencio discloses an MPEG system that generates a fidelity indicative parameter that is used by the decoder to equalize picture quality by essentially degrading high quality images to that of a lower quality image. The fidelity indication is generated during encoding and added to the header information. The fidelity indication is

used to determine level of degradation. (See col. 8, lines 1-5, which state, in part, [f]or example, those frames within the GOP having relatively high fidelity are degraded in terms of one or more frame parameters analyzed ... such that the inter-frame variance in fidelity degradation within the GOP is constrained to a level at or below a level resulting in a noticeable breathing artifact."). Hence, the indicator may change from frame to frame.

Tan discloses a system that includes a complexity estimator that estimates a weighted complexity level of a frame at the encoder and transmits the complexity level to a decoder. The decoder determines a processing level using the complexity level and provides actual processing levels back to the encoder. The encoder uses the provided actual processing levels to refine the weighting factors used to estimate the complexity level. Hence, the complexity estimator is included in the generating or encoding unit and not in the decoding unit. The decoding unit does not perform any calculation regarding the processing or the complexity of the image.

With regard to independent claim 8, this claim recites a decoding system including a "complexity estimator configured to extract the header information ... and further configured to execute video complexity algorithms based on said extracted header information." The applicant has further elected to amend claim 8 to more clearly state the invention. In particular, applicant has amended claim 8 to further recite "wherein said extracted header information is used to determine an associated computation load that are combined to determine a total computation load." Hence, claim 8 discloses a decoding system that includes a complexity estimator that estimates a complexity based on information included in the header information and that the information is used to determine an associated computation factor.

As noted above, both Florencio and Tan include processing that is performed at the encoder, and the resultant processed information is provided to and used by the decoding system. Neither Florencio nor Tan suggest any operation at the decoder for determining computation loads based on information in the transmitted header. Accordingly, one would not be motivated to combine the teachings of Florencio and Tan to determine a computation load at the decoder as is claimed. Further, even if the

teachings of Florencio and Tan were combined, the combined device would not include all the elements of the invention as recited in amended claim 8, as the combined device does not teach the decoder performing any operation similar to that claimed. Rather, the combined device may be used to refine the Florencio fidelity indicative parameter based on the feedback provided by the decoder. However, this refinement of the fidelity indicative parameter is contrary to the teachings of Florencio as this parameter is a measure of the quality of transmitted images and should be unaffected by the feedback taught by Tan. Thus, the use of feedback of the combined device would defeat the operation of the Florencio device.

Having shown that the cited references do not suggest or provide motivation to combine them as suggested by the examiner, applicant submits that the reasons for the examiner's rejections of the claims have been overcome and can no longer be sustained. Applicant respectfully requests reconsideration, withdrawal of the rejection and allowance of the claims.

With regard to claims 9-13, these claims ultimately depend from independent claim 8, which has been shown to be not obvious and allowable in view of the cited references. Accordingly, claims 9-13 are also allowable by virtue of their dependence from an allowable base claim.

With regard to independent claim 14, this claim recites a method for improving decoding that includes calculating a total computation load ... based on the classification of header information. As the examiner states Florencio does not specifically disclose an estimator for calculating a total computation load, however, Tan teaches a complexity estimator that is applied to the decoder.

As stated above, neither Florencio nor Tan teach a decoding system determining a complexity estimator and a device formed from the combined teachings would not perform a determination of a complexity level at the decoder. Hence, the combined teachings of Florencio and Tan would not include all the elements claimed.

Having shown that the combined device resulting from the teachings of the cited references does not include all the elements of the present invention, applicant

submits that the reasons for the examiner's rejections of the claims have been overcome and can no longer be sustained. Applicant respectfully requests reconsideration, withdrawal of the rejection and allowance of the claims.

With regard to claims 15-21, these claims ultimately depend from independent claim 14, which has been shown to be not obvious and allowable in view of the cited references. Accordingly, claims 15-21 are also allowable by virtue of their dependence from an allowable base claim.

With regard to independent claim 22, this claim was rejected for essentially the same reason as claims 8 and 14. Hence, the remarks made with regard to claims 8 and 14 are appropriate, and repeated, in response to the rejection of claim 22. Accordingly, the reason for the examiner's rejection of claim 22 has been overcome and can no longer be sustained. Applicant respectfully requests reconsideration, withdrawal of the rejection and allowance of the claims.

With regard to claims 23-30, these claims ultimately depend from independent claim 22, which has been shown to be not obvious and allowable in view of the cited references. Accordingly, claims 23-30 are also allowable by virtue of their dependence from an allowable base claim.

With regard to claims 4 and 5, these claims ultimately depend from independent claim 1, which includes subject matter not disclosed in either cited reference. Accordingly, claims 4-5 are also allowable by virtue of their dependence from an allowable base claim.

Claim 6 stands rejected pursuant to 35 USC §103 as being unpatentable over Florencio in view of USP No. 6,011,498 to Wittig. It is the examiner's position that Florencio does not specifically disclose wherein macroblock-type, a motion vector magnitude, a motion vector count, non-zero discrete cosine transformer coefficients, and

a coded block pattern... However, this limitation is well known to one of ordinary skill in the art as Wittig teaches the extracted header information.

Applicant respectfully disagrees, and explicitly traverses, the examiner's rejection. As stated previously, Florencio determines a quality indicator based on the quality of the image. Florencio does not disclose that the quality indicator is based on any of the information; macroblock-type, a motion vector magnitude, a motion vector count, non-zero discrete cosine transformer coefficients, and a coded block pattern. In this case, the examiner has combined the teachings of two devices based on the fact that the references are in the same field and contain certain keywords. Neither reference provides any motivation to combine their teachings as suggested by the examiner to develop a decoding system that determines a complexity level based on certain header information.

Accordingly, claim 6 is not obvious in view of the cited references.

Notwithstanding the above remarks, applicant has requested this claim be cancelled. Hence, the examiner's reason for rejecting the claim is not longer pertinent.

Having shown that the cited references do not suggest or provide motivation to combine them as suggested by the examiner, applicant submits that the reasons for the examiner's rejections of the claims pursuant to 35 USC §103 have been overcome and can no longer be sustained. Applicant respectfully requests reconsideration, withdrawal of the rejection and allowance of the claims.

Applicant, through his attorney, wishes to thank the examiner for his indication of allowable subject matter in claims 16-21 and claims 25-30, if rewritten to include the limitations of the base claim and any intervening dependent claims. However, applicant respectfully submits that the amendments made to the claims and the remarks made herein place all the claims in an allowable form. Accordingly, applicant elects not to amend the claims indicated to be allowable if rewritten at this time, and reserves the right to amend them at a subsequent time.

Having addressed the examiner's objections and rejections under 35 USC § § 102 and 103, applicant submits that for the amendments and remarks made herein the

reasons for the examiner's rejections have been overcome and can no longer be sustained. Applicant respectfully requests reconsideration and withdrawal of the rejections and that a Notice of Allowance be issued.

Should any unresolved issues remain that the examiner believes may be resolved via a telephone call, the examiner is invited to call Applicant's attorney at the telephone number below.

No fees are believed necessary for the filing of this Amendment and Response.

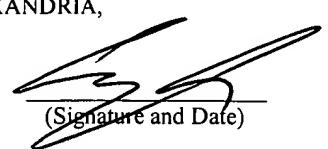Respectfully submitted,

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